



# Suggested Preventive Maintenance Schedule for Sahara Air Products Heat-of-Compression Air Dryers

**SAHARA AIR PRODUCTS**  
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## Service Guide



Before servicing components, it is advised that this entire Service Guide be studied and clearly understood.

*These instructions apply to the following Models of Sahara Regenerative Air Dryers:*

**Heat-of-Compression  
(HC & SP)**

## **SAHARA AIR PRODUCTS**

### **SERVICE GUIDE**

#### ***Suggested Preventive Maintenance Schedule for HC & SP Heat-of-Compression Air Dryers***

### **SUGGESTED PREVENTIVE MAINTENANCE SCHEDULE**

The Heat-of-Compression (HC & SP) air dryer requires a minimum of maintenance as most components are maintenance-free; however, a certain amount of preventive maintenance is recommended to assure years of trouble-free, high performance service.

Whereas it is recommended that the dryer be observed and inspected as often as it is practical, the following is a minimum requirement.

#### **DAILY**

1. Check operating conditions: inlet flow, inlet pressure, and temperature.
2. Check filter differential pressures.
3. Check dryer operating cycle.
4. Check outlet dew point.
5. Test primary drain by pushing drain test button.

**Note:** Maintenance steps above can be accomplished while the dryer is operating.

#### **EVERY 8,000 HOURS OR 12 MONTHS**

1. Perform steps 1 through 5 as outlined in "DAILY".
2. If dryer has optional Dew Point Demand System:
  - a. Recalibrate or replace dew point probe/SMT. Contact Henderson Engineering Co. for instructions which will include the issue of a Return Merchandise Authorization (RMA) to send dew point equipment for recalibration to Henderson Engineering Co.
  - b. Replace inline filter for dew point sample cell.
3. Check the air temperature at aftercooler outlet. Coolers are standardly designed to have 95°F / 35°C outlet temperature; based on 85°F / 28.44°C water (for different water temps, reference the air dryer instruction manual for the Specifications for proper GPM water flow). If the outlet temperature is above 95°F / 35°C, then:
  - a. Increase the cooling water flow.
  - b. Lower the cooling water temperature.
  - c. Back flush and thoroughly clean the aftercooler, to restore efficiency.

*Continued on next page.*

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### **EVERY 8,000 HOURS OR 12 MONTHS**

4. Test the drain trap secondary assembly and drain the sump at the separator drain of sludge that may have accumulated by closing off the primary drain until the secondary valve actuates.

**Note:** Maintenance steps above can be accomplished while the dryer is operating.

5. Replace filter elements.

**Note:** If filters are able to be isolated by themselves, dryer can continue to operate. Isolate and depressurize the filters only.

**Note:** For detailed maintenance procedures for replacing filter elements, contact Henderson Engineering Co. and request *Service Guide – Filter Element Replacement Instructions* (Reference SV024).

6. Isolate and depressurize the dryer.

7. Disconnect power to the dryer.

8. Replace mufflers (**on HC dryers only**).

9. On HC dryers that have a trim heater, inspect heater contactor for excessive wear and replace, if necessary. (Applicable for electric heater only; not necessary for steam heater.)

10. Make certain all air and electrical connections are sound. On HC dryers that have a trim heater, reference the electrical torque chart which can be found inside the dryer electrical panel.

11. Repressurize the dryer and place "onstream".

12. Reconnect power to the dryer.

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## **SUGGESTED PREVENTIVE MAINTENANCE SCHEDULE**

### **EVERY 16,000 HOURS OR 24 MONTHS**

1. Perform steps 1 through 9 as outlined in "EVERY 8,000 HOURS OR 12 MONTHS".



#### **Attention / Warning!**

**DO NOT REPRESSURIZE DRYER OR RECONNECT POWER TO THE DRYER YET!**

2. Carefully disassemble and clean the 3-way solenoid valve on the separator drain trap.
3. Rebuild the secondary drain valve by installing a valve repair kit.
4. Disassemble and clean the primary drain.
5. It is recommended that the aftercooler be back-flushed and thoroughly cleaned, both tube side and shell side, at 16,000 hours; but this interval should be adjusted shorter or longer, based on water quality and plant experience.
6. Open the cooling water supply valve and adjust as required.
7. Test desiccant for dynamic capacity. Contact Henderson Engineering Co. for instructions which will include the issue of a Return Merchandise Authorization (RMA) to send desiccant samples for testing to Henderson Engineering Co.
8. Make certain all air, electric, and water connections are sound. On HC dryers that have a trim heater, reference the electrical torque chart which can be found inside the dryer electrical panel.
9. Repressurize the dryer and place "onstream".
10. Reconnect power to the dryer.

## SAHARA AIR PRODUCTS

### SERVICE GUIDE

#### Suggested Preventive Maintenance Schedule for HC & SP Heat-of-Compression Air Dryers

## SUGGESTED PREVENTIVE MAINTENANCE SCHEDULE

### EVERY 32,000 HOURS OR 48 MONTHS

1. Perform steps 1 through 6 as outlined in "EVERY 16,000 HOURS OR 24 MONTHS".



#### Attention / Warning!

**DO NOT REPRESSURIZE DRYER OR RECONNECT POWER TO THE DRYER YET!**

2. Drain all of the desiccant from both vessels through the drain at the bottom of each vessel. If a handhole/manway is available, the desiccant can be removed using a vacuum truck (**recommended**).
3. Refill both vessels with the proper amount of desiccant. Reference the air dryer instruction manual for the Specifications and/or Spare Parts List which indicate the required quantity of desiccant. You can also contact Henderson Engineering for assistance; please have the S/N of the air dryer available.

**Note:** For detailed maintenance procedures for removing and installing desiccant, contact Henderson Engineering Co. and request *Service Guide - Desiccant Fill Instructions* (Reference SV023).

4. Rebuild the actuators and valves by installing repair kits in the major switching valves. If dryer has check valves, replace the check valves at this time.
5. Carefully disassemble and clean the solenoid valves in the control group; rebuild with new parts, only if damage or serious wear is evident.
6. Make certain all air, electric, and water connections are sound. On HC dryers that have a trim heater, reference the electrical torque chart which can be found inside the dryer electrical panel.
7. Repressurize the dryer and place "onstream".
8. Reconnect power to the dryer.

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#### FIELD & TECHNICAL SUPPORT

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#### INSIDE SALES FOR PARTS

**Inside Parts Sales**  
Mimoza Jaisi

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When contacting Henderson Engineering, please have the following information available:

- **Serial Number** which can be found on the air dryer; either on the ASME code nameplate on the dryer towers or in the electrical enclosure.
- **Model Number** which can be found on the air dryer; either on the ASME code nameplate on the dryer towers or in the electrical enclosure.
- Inlet air temperature and pressure.
- Actual inlet flow rate.



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is proud to be certified to the  
**ISO 9001 Quality Management System**  
standards and guidelines.

**Sahara Air Products, Div. of Henderson Engineering Co., Inc.**

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Receiving Dock Hours: Monday - Thursday 7:30 a.m. - 3:30 p.m.

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